UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,168	07/18/2003	Steven V. Harter	M61.12-0256	2733

27366 7590 02/15/2006	EXAMINER
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	ART UNIT	PAPER NUMBER
900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319	2164	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Office Action Summary	10/623,168	HARTER, STEVEN V.	
	Examiner	Art Unit	
	Phuong-Thao Cao	2164	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23 and 25-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to Application filed on 07/18/2003.

2.   Claims 1-27 are pending.   Claim 24 is missing.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

       As to claims 3-5, it is unclear if the limitation "second property" relates to properties of the first object or the second object as recited in claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.   Claims 1-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

        Claims 1-27 recite "computer readable medium" which is not limited to tangible media in

accordance with Applicant's specification, which states that computer readable media may

comprise computer storage media and communication media. Communication medium such as a

modulated data signal is not in and of itself a tangible medium. Note that amending claims 1-27

to recite -- computer storage medium -- would overcome this rejection.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another
> filed in the United States before the invention by the applicant for patent or (2) a patent granted on an
> application for patent by another filed in the United States before the invention by the applicant for patent,
> except that an international application filed under the treaty defined in section 351(a) shall have the effects
> for purposes of this subsection of an application filed in the United States only if the international
> application designated the United States and was published under Article 21(2) of such treaty in the English
> language.

8.   Claims 1, 6-12, 14-17, and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated

by Deffler et al. (US Patent No 6,859,919).

        As to claim 1, Deffler et al. teach:

"A computer readable medium having instructions for validating data in a database system" (see [column 3, lines 30-55]), the instructions comprising:

"instantiating a property of an object as a second object" (see [column 10, lines 28-42] wherein accessor is an object instantiated based on a property, as illustrated in Applicant's claim language; also see [column 8, lines 43-50];

"obtaining constraint information pertaining to the property to be validated" (see [column 8, lines 60-65] and [column 9, lines 5-10] wherein the disclosure of UMEPropertySematicI as an interface for any sematic or modeling rule that affects modification of a property, wherein "sematic or modeling rule" as disclosed is equivalent to Applicant's "constraint information pertaining to the property", implies the way to obtain constraint information as illustrated in Applicant's claim language);

"applying constraint information to a property of the second object to ascertain if the property is validated" (see [column 9, lines 3-20] wherein fire method is a way to applying modeling rule to check upon property model to see if it is in an valid state wherein "modeling rule" is equivalent to Applicant's "constraint information", also see [column 10, lines 25-43] for the disclosure of object 'accessor' constructed to handle the data type of the property and all operations on a property conducted via an accessor wherein "accessor" is equivalent to Applicant's "second object", which implies that validation process as disclosed must include the applying of modeling rule to a data element or property of object 'accessor', as illustrated in Applicant's claim language).

As to claim 6, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Deffler et al. teach:

"setting the value of the property if the constraint information is met" (see [column 5, lines 15-25], [column 9, lines 5-20] and [column 10, lines 23-35] wherein sematics is equivalent to Applicant's "constraint information").

As to claim 7, this claim is rejected based on arguments given above for rejected claim 6 and is similarly rejected including the following:

Deffler et al. teach:

"issuing an event indicating the property is valid" (see [column 6, lines 13-25] wherein the disclosure of providing an indication that the action was successful implies that the property is valid as illustrated in Applicant's claim language).

As to claim 8, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Deffler et al. teach:

"issuing an exception if the constraint information is not met" (see [column 6, lines 13-18] wherein "any one of the set of semantics" is equivalent to Applicant's "constraint information" and "indication that the action failed" is equivalent to Applicant's "exception").

As to claim 9, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Deffler et al. teach:

"issuing an event indicating the property value is changing" (see [column 5, lines 43-67] and table One for event "PostEdit" which is equivalent to Applicant's claim language).

As to claim 10, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Deffler et al. teach:

"issuing an event indicating whether the property value is changeable" (see [column 5, lines 43-67] and table One for event "PreEdit" which is equivalent to Applicant's claim language).

As to claim 11, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Deffler et al. teach:

"obtaining a current value of the property" (see [column 10, lines 35-42] wherein the disclosure of way of reading to data element of 'accessor' object of the property implies the ability to obtain a current value of the property as illustrated in Applicant's claim language).

As to claim 12, Deffler et al. teach:

"A computer readable medium having instructions comprising a framework for validating data in a database system" (see [column 3, lines 30-55]), the instruction comprising:

"identifying at least one property of an entity to be validated" (see [column 5, lines 35-50] wherein a property to be validated must be identified based on requests in order to invoke respective semantics as disclosed);

"identifying constraint information to be used for ascertaining if said at least one property is valid" (see [column 5, lines 10-50] wherein "semantics" is equivalent to Applicant's "constraint information", the respective semantics must be identified in order to be invoked as disclosed and the action of request is successful only when the property is valid [column 6, lines 33-40]);

"forming an object of said at least one property upon execution of said instructions in order to perform validation" (see e.g., [column 10, lines 25-42] discloses accessor as an object constructed to handle all operations on a property which equivalent to Applicant's claim language).

As to claim 14, this claim is rejected based on arguments given above for rejected claim 12 and is similarly rejected including the following:

Deffler et al. teach:

"identifying events to be issued during validation" (see [column 6, lines 25-55]).

As to claim 15, this claim is rejected based on arguments given above for rejected claim 14 and is similarly rejected including the following:

Deffler et al. teach:

"a notification that a value of the property is changing" (see [column 5, lines 48-55],

[column 9, lines 31-38] and Table One wherein event "PreEdit" is equivalent to a notification as

illustrated in Applicant's claim language).

As to claim 16, this claim is rejected based on arguments given above for rejected claim

14 and is similarly rejected including the following:

Deffler et al. teach:

"a notification that a value of the property has changed" (see [column 5, lines 48-55],

[column 9, lines 30-38] and Table One wherein event "PostEdit" is equivalent to a notification as

illustrated in Applicant's claim language).

As to claim 17, this claim is rejected based on arguments given above for rejected claim

14 and is similarly rejected including the following:

Deffler et al. teach:

"an event to be issued comprises a status of the property has changed" (see [column 5,

lines 48-55], [column 9, lines 30-38] and Table One wherein event "PreNull" is equivalent to

event to be issued comprises a status of the property has changed as illustrated in Applicant's

claim language since status of the property would be changed from existing to non-existing as

considered by the system when a property is destroyed).

As to claim 20, this claim is rejected based on arguments given above for rejected claim 12 and is similarly rejected including the following:

Deffler et al. teach:

"wherein identifying constraint information comprises identifying constraint information comprises identifying valid criteria for a value of the property" (see [column 5, lines 1-25] wherein semantics is equivalent to Applicant's "constraint information", locating respective set of property semantics is equivalent to identifying constraint information as illustrated in Applicant's claim language, and a sematic that enforces the rule "No two columns in a single database table may have the same name" is equivalent to Applicant's "valid criteria for a value of the property").

As to claim 21, this claim is rejected based on arguments given above for rejected claim 12 and is similarly rejected including the following:

Deffler et al. teach:

"identifying constraint information comprises identifying criteria of when a value of the property can be changed" (see [column 5, lines 5-25] and [column 6, lines 32-45] wherein semantics is equivalent to Applicant's "constraint information", and the disclosure of the change is cancelled if found to be invalid indicates that sematics must provide some criteria to determine when the change would be valid, as illustrated in Applicant's claim language).

As to claim 22, this claim is rejected based on arguments given above for rejected claim 12 and is similarly rejected including the following:

Deffler et al. teach:

"the criteria identifies that the value can be changed anytime upon execution of the

instructions" (see [column 5, lines 5-25] wherein changes made to the respective property

according to semantics invoked happen anytime unless one of sematics invoked for an action is

violated).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

10.   Claims 2-5 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Deffler et al. (US Patent No 6,859,919) as applied to claims 1, 17 and 21 above, and further in

view of Stewart et al. (Publication No US 2003/0191731).

As to claim 2, this claim is rejected based on arguments given above for rejected claim 1

and is similarly rejected including the following:

Deffler et al. do not teach "constraint information comprises a function of the value of the

property, and wherein applying constraint information comprises comparing a received value for

the property to the constraint information."

Stewart et al. teach "constraint information comprises a function of the value of the property and wherein applying constraint information comprises comparing a received value for the property to the constraint information" (see Stewart et al., [0036]-[0039], [0097], [0103], [0104] and [0108] wherein Rule is equivalent to Applicant's "constraint information", Rule of maxium value is equivalent to Applicant's "function of the value of the property", and applying Rule of maximum value and/or minimum value must be done by compared received value to those maximum and/or minimum values as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. by the teaching of Stewart et al., because adding constraint information comprising a function of the value of the property and wherein applying constraint information comprises comparing a received value for the property to the constraint information would enable the system to validate data more effectively based on its value.

As to claim 3, this claim is rejected based on arguments given above for rejected claim 1 and is similarly rejected including the following:

Deffler et al. do not teach "constraint information comprises a function of status of the second property, and wherein applying constraint information comprises examining the status of the second property".

Stewart et al. teach "constraint information comprises a function of status of a second property and wherein applying constraint information comprises examining the status of the second property" (see Stewart et al., [0036]-[0039], [0097], [0103], [0104] and [0108] wherein

Rule is equivalent to Applicant's "constraint information", state of the Property is equivalent to Applicant's "a second property" (since value and state of Property are two properties of Data Object of Property), and read-only Rule is equivalent to Applicant's "function of status of a second property", and applying read-only Rule must be done by examining the current state of the Property, as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. by the teaching of Stewart et al., because adding constraint information comprising a function of status of a second property and wherein applying constraint information comprises examining the status of the second property would enable the system to validate data more effectively based on its status.

As to claim 4, this claim is rejected based on arguments given above for rejected claim 3 and is similarly rejected including the following:

Deffler et al. as modified do not teach "the status of the second property comprises whether its value can be changed."

Stewart et al. teach "the status of the second property comprises whether its value can be changed" (see [0038] wherein the state of the Property is equivalent to Applicant's "the second property", and read-only is the status indicating whether its value can be changed as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. by the teaching of Stewart et al., because adding the status of the second property comprises whether its value can be changed would

enable the system to effectively control and enforce the data dependency to assure the

correctness and completeness of a data system.

As to claim 5, this claim is rejected based on arguments given above for rejected claim 4

and is similarly rejected including the following:

Deffler et al. as modified do not teach "the status of the second property comprises

whether its value is valid."

Stewart et al. teach "the status of the second property comprises whether its value is

valid" (see [0038] wherein the state of the Property is equivalent to Applicant's "the second

property", and valid/invalid is the status indicating whether its value is valid as illustrated in

Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Deffler et al. by the teaching of Stewart et al., because

adding the status of the second property comprises whether its value is valid would enable the

system to effectively validate the data to assure the correctness and completeness of a data

system.

As to claim 18, this claim is rejected based on arguments given above for rejected claim

17 and is similarly rejected including the following:

Deffler et al. do not teach "the status comprises whether the value of the property is

changeable."

Stewart et al. teach "the status comprises whether the value of the property is changeable" (see [0038] wherein read-only is the status indicating whether the value of the property is changeable as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. by the teaching of Stewart et al., because adding the status comprises whether the value of the property is changeable would enable the system to effectively control and enforce the data dependency to assure the correctness and completeness of a data system.

As to claim 19, this claim is rejected based on arguments given above for rejected claim 4 and is similarly rejected including the following:

Deffler et al. as modified do not teach "the status comprises whether the value of the property is valid."

Stewart et al. teach "the status comprises whether the value of the property is valid" (see [0038] wherein valid/invalid is the status indicating whether the value of the property is valid as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. by the teaching of Stewart et al., because adding the status comprises whether the value of the property is valid would enable the system to effectively validate the data to assure the correctness and completeness of a data system.

11.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deffler et al. (US

Patent No 6,859,919) as applied to claim 12 above, and further in view of Alexander (US Patent

No 6,732,331).

        As to claim 13, this claim is rejected based on arguments given above for rejected claim

12 and is similarly rejected including the following:

        Deffler et al. do not teach "identifying a validator of a function of a type of said at least

one property, the validator being of a class of validators."

        Alexander teaches "identifying a validator of a function of a type of said at least one

property, the validator being of a class of validators" (see Alexander, [column 6, lines 5-15],

[column 13, lines 42-65] and [column 7, lines 35-45] wherein each control is equivalent to

Applicant's "property").

        It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Deffler et al. by the teaching of Alexander, since

identifying a validator of a function of a type of said at least one property and the validator being

of a class of validators enables to validate data more effectively and efficiently and provides the

benefit of code reusability.

12.   Claims 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deffler

et al. (US Patent No 6,859,919) as applied to claim 21 above, and further in view of Pastor et al.

(US Patent No 6,681,383).

As to claim 23, this claim is rejected based on arguments given above for rejected claim 21 and is similarly rejected including the following:

Deffler et al. do not teach "the criteria identifies that the value can be changed as a function of creation of a corresponding entity."

Pastor et al. teach "the criteria identifies that the value can be changed as a function of creation of a corresponding entity" (see e.g., [column 11, lines 25-35] and [column 15, lines 40-45] disclose that the number of books of reader is incremented as an instance of the loan class is created which is equivalent to Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. by the teaching of Pastor et al., since including the criteria identifies that the value can be changed as a function of creation of a corresponding entity enable to the system to model and validate effectively data and the relationship between objects and data.

As to claim 25, this claim is rejected based on arguments given above for rejected claim 21 and is similarly rejected including the following:

Deffler et al. do not teach "the criteria identifies that the value can be changed as a function of a status value of another property."

Pastor et al. teach "the criteria identifies that the value can be changed as a function of a status value of another property" (see e.g., [column 11, lines 25-35] and [column 15, lines 40-45] disclose that the number of books of reader is incremented as the state of the book changed to "not available" which is equivalent to Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. by the teaching of Pastor et al., since including the criteria identifies that the value can be changed as a function of creation of a corresponding entity enable to the system to model and validate effectively data and the relationship between data.

13.   Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deffler et al. (US Patent No 6,859,919) as modified by Pastor et al. (US Patent No 6,681,383) as applied to claim 25 above, and further in view of Stewart et al. (Publication No US 2003/0191731).

As to claim 26, this claim is rejected based on arguments given above for rejected claim 25 and is similarly rejected including the following:

Deffler et al. as modified do not teach "the status value comprises whether said another property is changeable."

Stewart et al. teach "the status value comprises whether said another property is changeable" (see [0038] wherein read-only is the status indicating whether the value of the property is changeable as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. as modified by the teaching of Stewart et al., because adding the status value comprises whether another property is changeable would enable the system to effectively control and enforce the data dependency to assure the correctness and completeness of a data system.

As to claim 27, this claim is rejected based on arguments given above for rejected claim 26 and is similarly rejected including the following:

Deffler et al. as modified do not teach "the status value comprises whether said another property is valid."

Stewart et al. teach "the status value comprises whether said another property is valid" (see [0038] wherein valid/invalid is the status indicating whether the value of the property is valid as illustrated in Applicant's claim language).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Deffler et al. as modified by the teaching of Stewart et al., because adding the status comprises whether the value of the property is valid would enable the system to effectively validate the data to assure the correctness and completeness of a data system.

14.   The prior art made of record and not replied upon is considered pertinent to Applicant's disclosure.

Mc George JR. (Publication No US 2002/0095406) teaches a system and method for validating data submitted to a database application including an exception set class.

Pascoe et al. (US Patent No 5,778,369) teach method and apparatus for managing exceptions.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong-Thao Cao whose telephone number is (571) 272-2735. The examiner can normally be reached on 8:30 AM - 5:00 PM (Mon - Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PTC

February 8, 2006

Primary Examiner
Art Unit 2167